A BRITISH COLUMBIA SKILLS DEVELOPMENT STRATEGY

REPORT OF THE SKILLS DEVELOPMENT ADVISORY COMMITTEE

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DECEMBER, 1989

92-06839/

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REPORT OF THE SKILLS DEVELOPMENT ADVISORY COMMITTEE
EXECUTIVE SUMMARY

The Skills Development Advisory Committee was given the task, by the Honourable Stanley B. Hagen, to review the existing skills development system in the province and recommend ways in which it could be enhanced to meet the needs of an expanding provincial economy, provide individuals with rewarding careers, and allow us to compete successfully in the global marketplace of the 1990's. The Committee included representation from colleges and institutes, business and industry, and federal and provincial governments.

After reviewing the existing system, the Committee found that, while it represented a strong infrastructure of resources and choices, certain changes were needed to strengthen it.

The strategy that the Committee proposed to reduce the barriers to equitable and active participation in skills development included the provision by government of information and advice to employers, organizations and institutions to assist them with human resource planning and development; initiatives to enhance the capacity of institutions to respond to existing and future labour market demands; initiatives to increase participation of under-represented groups in training programs; enhancing flexibility in funding and delivery; and a communications plan to increase the awareness of the value of training and the need for effective partnerships to be developed between the stakeholders involved in it.

Specific recommendations are:

1. **Increase flexibility and expand the capacity (i.e., base) of the existing skills development system to meet the needs of the B.C. labour market. (The system includes public and private career, technical and vocational institutions providing entry-level and upgrading opportunities.)** This will require:

   - additional instructional spaces;
   - capital to update facilities and equipment;
   - curriculum development;
   - block funding to colleges/institutes for broad categories of training rather than for specific programs; and

- development of alternate ways to deliver apprenticeship training

Rationale: Public and private training institutions are often prevented from quickly responding to local labour market needs as they arise. Industries are identifying increasing numbers of critical skill shortages to which the system is not totally responding. Colleges and institutes have also documented many local training needs to which they are unable to respond due to a lack of capacity. Skilled tradesmen and technical workers will enhance the province's competitiveness in this era of global change.

2. **Establish an advisory body to develop a framework in which needs can be identified and improvements to the system can be implemented, and to develop a planning mechanism to establish annual priorities for skills development.** The advisory body should ensure that:

- local advisory groups and partnerships among businesses, labour, colleges, schools, private training institutions, and governments are in existence in each region to identify local priorities and needs; and

- planning is complementary to existing or planned initiatives of all members of the system (e.g., CEIC's Labour Force Development Strategy).

Rationale: A strong, consensus-building mechanism is needed amongst stakeholders to enhance skills development and build a training culture. Integration and coordination of activities will be essential to this process.

3. **Enhance quality of the existing system** through initiatives which will:

- increase participation rates and access for under-represented groups (e.g., youth, women, older workers, social assistance recipients, Native Indians, and persons with disabilities);

- improve counselling, preparatory training, access to English language training, etc., and

- support faculty and trainer opportunities for updating in state-of-the-art technologies and practices through industry internships and institutions, and industry personnel exchanges.

Rationale: The decline in new labour force entrants and the increasing attrition amongst the aging workforce will require greater utilization of the existing workforce, particularly those persons on the margin of the labour market. Some initiatives are already in place to address training needs of under-represented groups such as the Task Force on Native Learners, the Task Force on Literacy, the federal Labour Force Development Strategy, etc. However, certain groups are still seriously under-represented in both training programs and the workplace. Greater utilization of the potential of these groups will contribute to economic growth and reduce dependency on social programs.

4. **Establish a fund to support innovation in training and human resource planning and development.** The quality of this in organizations could be enhanced through:

- assisting private sector firms, particularly small businesses, to articulate their training needs; and

- assisting organizations to develop and adopt open learning strategies for employees and self-employed persons.

Rationale: If organizations (public and private) can be motivated to incorporate the role of training into long term objectives, the province will benefit from increased economic growth.

5. **Develop a communications strategy to increase the awareness throughout the province of the critical importance of human resource planning and skills development, and of the changing nature of the world of work.** The strategy should be targeted to:

- employers, to inform them of the need to train employees using a variety of methods;

- educators/counsellors, to advise them of the need to prepare students for the real world of work;

- students, to inform them of the training options available and the skills presently needed in the labour market; and

- individuals, to remind them of their responsibility to contribute time and resources to skills development.

Rationale: The human resource development necessary for this province to compete successfully in the global marketplace of the 1990s will not happen until we are able to convince and motivate individuals and organizations to take advantage of skills development opportunities.

REPORT OF THE SKILLS DEVELOPMENT ADVISORY COMMITTEE:

A BRITISH COLUMBIA SKILLS DEVELOPMENT STRATEGY

I. BACKGROUND

The Government of British Columbia is committed to ensuring that a skills development system will be in place in the province that will meet the needs of an expanding provincial economy, allow us to compete successfully in the global marketplace in the 1990s, and provide individuals with rewarding careers. Government's role in this process should be that of facilitator, information sharer, climate setter, and promoter of partnerships amongst the various stakeholders in the skills development environment.

The March 30, 1989 Budget Speech emphasized the importance of retraining and better matching the skills of unemployed workers to available jobs. Several references were also made in the March 16, 1989 Speech from the Throne to improving the skills of British Columbia's workforce. Many initiatives are underway towards this end--improved access to advanced education, the expansion of the Training and Enterprise Centre network and the Training Investment Program, the creation of a Labour Market Information System, and the establishment of a Task Force on Employment and Training.

The Minister of Advanced Education and Job Training, the Honourable Stanley B. Hagen, in announcing his "Access for All" initiative in March, 1989, advised that 3,000 new spaces in university degree programs would be available in 1989 with an additional 1,000 new spaces for career, technical, vocational and adult basic education. The recognition by Cabinet, at the time of the access discussion, of the need to expand access to job training as well as to higher education gave the Minister the impetus to establish an Advisory Committee on Skills Development. This committee, comprising representatives of the major stakeholders in skills development--colleges, business and industry and federal and provincial governments--was given a mandate to determine the nature and scope of a skills development strategy, and to provide recommendations on enhancing access to, and participation in, skill development in British Columbia. The membership of the Advisory Committee is attached as Appendix I.

A Ministry of Advanced Education and Job Training Steering Committee, chaired by Mrs. Joyce Ganong, Assistant Deputy Minister, Job Training, Apprenticeship and Labour Market Policy, supports the Advisory Committee.

II. POLICY CONTEXT

1. Economy and Labour Market

British Columbia has been experiencing steady economic growth since the 1982 recession, reflected in strong increases in productivity, exports, gross domestic product and employment.

During the period 1981-87, productivity (output per worker) in the Mining and Woods Manufacturing sectors grew at an average annual rate of 13% per year, while employment in these sectors dropped at an average annual rate of -5% and -3.6%, respectively, over the same period. From 1978 to 1988, the value of British Columbia exports increased by 130% to $17.4 billion. Between 1983 and 1988, the provincial GDP (in constant 1981$) has grown an average of 3.9% a year, and it is expected to grow by almost 4% in 1989. In the same period, the annual growth rate in the labour force and in employment averaged 1.9% and 2.6% respectively. In the first six months of 1989, the B.C. economy generated 57,000 net new jobs which represents 46% of total job growth in Canada during the same period.

In addition to the demand for skills generated by a vibrant economy, other factors currently influence skills required in British Columbia. Global trading patterns, technological innovation, economic restructuring and demographic shifts have combined to create pressures. It is becoming increasingly evident that the supply of skilled workers is not keeping pace with the demand. A recent Canadian Labour Market and Productivity Centre study estimated that, by the end of 1988, there were over 50,000 vacancies in British Columbia which co-existed with an unemployment rate of 10.3% or 157,000 persons. In late 1988, the Canadian Federation of Independent Business found that 35% of its B.C. members had a job vacancy they could not fill. They identified skill shortages in managerial, scientific and technical, sales and product fabricating, assembly and repair occupations among small businesses in British Columbia. The B.C. construction industry is increasingly concerned over existing and impending skill shortages in the construction sector. In the third quarter of 1989, 15% of B.C. Manufacturers identified skill shortages as adversely affecting their production; up from a low of 1% in 1982. Other areas where skill shortages are apparent are in high technology occupations, health care professionals, computer specialists, service workers and highly skilled trades.

Advances in technology and higher value-added products and services have created the need for higher level skills in the B.C. workplace. Over the period 1981-88, job growth in managerial and professional occupations in B.C.

amounted to 98,000 jobs while growth in all other occupations was minus 10,000. Occupational projections show that the majority of new jobs created to 1993 will require a minimum of Grade 12 graduation.

The decline in new labour force entrants and the increasing attrition amongst the aging workforce will require utilization of existing workers and those persons on the margin of the labour market (e.g., persons with disabilities, women, natives, etc.). While employment growth continues, those aged 15 to 24 years--the main source of new labour force entrants--have declined as a proportion of the total working age population by 25% over the last decade. As well, under-represented groups (women, natives, visible minorities and the disabled) are creating new demands for access to skills development opportunities.

Entrepreneurial skills are needed for increasing numbers of small businesses and self-employed persons--small businesses account for 90% of all new jobs in the province. Excluding jobs in agriculture, self-employment represented 16%--one in six jobs--of the B.C. workforce in 1986. Over the 1981-88 period, self-employment in B.C. grew five times as fast as employment for paid workers--the highest in Canada.

The globalization of markets is also creating job change. It is estimated that the Free Trade Agreement will result in 27,600 net new jobs in B.C. concentrated in forestry, mining, high technology and service sectors. GATT changes in 1990 and a European Trade Agreement planned for 1992 will further globalize our economy. This internationalization of our economy is creating the need for new skills and training--international business and export skills, Pacific Rim customs and languages, trade law and practices, and more strategic marketing techniques.

2. Federal-Provincial Context

B.C.'s share of the Canadian Jobs Strategy (CJS), which covers a range of activities to enhance the skills, adjustment and employability of Canadians, is just over $200 million. In addition, under the federal Labour Force Development Strategy (LFDS), $800 million will become available nationally for training, mobility and entrepreneurship as a result of amendments to the Unemployment Insurance Act. While no guarantees have yet been made of B.C.'s share of these funds, it is likely that approximately $80 million could be available to the province. Through the Canada-B.C. Agreement on Training and federal-provincial consultation on Community Futures, Industrial Adjustment Services and other CJS programs, B.C. is able to influence the direction of federal expenditures on skills development.

Other federal-provincial agreements in the area of human resource development are currently being negotiated, including the Social Assistance Recipients Agreement (SARS), the Program for Older Worker Adjustment, the Immigration Agreement, and the Vocational Rehabilitation for Disabled Persons (VRDP) Agreement. The Training, SARs and VRDP Agreements involve approximately $35 million, $21 million and $21 million respectively in federal funds for British Columbia in 1989/90.

The B.C. government is currently working with other provinces and the federal government to ensure that the new LFDS is implemented effectively in our province; and that, as well as helping those most in need, the Strategy includes proactive programs to assist persons already in the workforce and to assist local economies to support economic diversification.

3. Skills Development System

Skills development is the improvement or development of skills in persons that will allow them to actively participate in the labour market and take advantage of opportunities for advancement. This includes basic skill development, entry level training, continuous training and skills upgrading, retraining and training of disadvantaged persons. Training periods can range from two weeks to four years. Investment in skills development helps to ensure a qualified, flexible, adaptable and motivated workforce that can meet the present and future demand for highly skilled workers. The development of a provincial Skills Development Strategy in no way suggests that a comprehensive skills development system does not exist at this time.

The post-secondary education system provides college and university training throughout the province. There are three public universities and fifteen regional community colleges offering university transfer courses as well as vocational and technical training, four institutes providing diploma programs in specialized fields, and the Open Learning Agency. "Access for All" further strengthens the capacity of this system to meet the needs of British Columbians by increasing access to academic, career, technical, vocational, and adult basic education programs and increasing access to the system for native learners and the disabled.

Our universities provide liberal and professional education as well as research. Their role often transcends the borders of the province, particularly with regard to research. Colleges are sensitive to the needs of the regions in which they are located. They provide a variety of academic, vocational, career, technical, continuing

education, and adult basic education programs in response to local demands. The institutes provide specialized instruction in the fields of technology and trades, art and design, law enforcement and public safety, and marine training. Some of these institutes have the capacity to provide outreach programs at the invitation of companies, professional associations, native Indian bands, and other groups.

Some preparation for employment also takes place in the K-12 system through career counselling, work experience, cooperative education and school board adult education programs.

Approximately 50,000 students are currently enrolled in open learning programs and, while it is not a panacea, open learning offers another option of skills development for residents of this province. It is a relatively new concept in B.C., and has tremendous potential for training as it can be adapted to the needs of the learner and the organization. The open learning system is flexible, responsive and learner-centered--it allows learners to design their own learning and participate in it at their own pace. Students can finish high school through open learning, take university or college programs such as health sciences, social work, business management, technology and trades, and enrol in English as a Second Language. A unique opportunity exists here for persons with special needs because of the accessibility of the option. Open learning can also be an effective tool to enhance workplace training and traditional college learning.

There are approximately 465 private training institutions in the province which offer employment-related training to over 55,000 students annually in a wide range of occupations such as computer programming, underwater technology and flight training. While it is often more expensive, private training institutes offer specialized, market-driven training; in some cases, in disciplines not addressed by public institutions.

Another existing skill development option is workplace training. It is practical, relevant and cost-effective, and offers an alternative to the more formalized college and university training environment. In addition, there are many individuals who may never have the opportunity to graduate from a post-secondary institution due to financial or other barriers. Employer-based training may be their only chance of improving their labour market qualifications.

Other current initiatives to facilitate skills development include the Training and Enterprise Centres (TEC) and the Training Investment Program (TIP). Within the

next two years, each region of the province will have a centrally located TEC to support training and human resource planning. TECs include other ministries, Chambers of Commerce, college staff, etc., and provide training information, business and economic development information, distance learning resources and access to management training. The Training Investment Program provides financial and consultative support for direct training investments to allow firms to enhance their training capabilities. This will allow firms to respond more readily to new opportunities created by international trade and technological changes. Additionally, the new Office for International Competitiveness, whose principal role is to assist small and medium-size firms to become globally competitive, will identify skills development opportunities.

Government's role in skills development, aside from sponsoring training and encouraging upward mobility for its own public servants, is to build awareness of the need for a training culture with participation by both public and private sectors; provide information on training resources and needs; provide labour market analysis and policy development; and promote excellence in the delivery of training programs and services to the people of British Columbia.

Individuals also have a responsibility to initiate and finance their own skills development. However, they need adequate information to make appropriate career choices and plan accordingly. Wherever feasible, they must be encouraged to seek out opportunities and act on them. Certain groups will always require more support than others, but personal motivation should not be underestimated. When an individual has a personal stake in his or her training, and accepts responsibility for his or her role in this training, the benefits will be far-reaching.

Professional associations such as the Association of Professional Engineers of B.C., the Institute of Chartered Accountants of B.C., the Law Society of B.C., Registered Nurses Association of B.C., and the Applied Science Technologists and Technicians of B.C. are just a few of the associations which provide training and upgrading opportunities for their members. Labour groups also provide and coordinate training for their members. In addition, such organizations set professional standards for the industry.

While the diversity of the existing B.C. skills development system represents a strong infrastructure of resources and choices, certain challenges must be addressed by the various stakeholders to ensure that British Columbia has a skilled workforce that matches opportunities at home and abroad. These challenges have been identified by the Advisory Committee in the context of the following issues, and, subsequently, in the Strategy section of this report.

III. ISSUES

1. Literacy

Functional literacy is defined as the ability to use printed and written information to function in society, to develop and articulate one's goals and to develop one's knowledge and potential. Illiteracy, a person's inability to read, write or master numeracy, provides a definite barrier to employment or re-employment. In B.C., 17% of the population (or approximately 392,000 persons) over the age of 15 are functionally illiterate. Of this number, 50% are over the age of 55. In 1988, 14% of persons in B.C. with less than Grade 9 education were unemployed, compared to 4.8% of persons with a university degree. According to the Southam Literacy Study, illiteracy creates an estimated annual drain of over $10 billion across Canada.

Certain target groups are more affected by low literacy levels, and therefore experience greater barriers to employment and skills development. They include older workers, school dropouts, immigrants, natives, social assistance recipients and persons with disabilities. These people often require support services to help them overcome psychological and physical barriers to literacy training. Basic literacy and numeracy is not only a prerequisite for most jobs; it is also often essential for further training or retraining to enable workers to advance in career paths.

2. Entry-Level Skills

The two target groups that have the most difficulty in entering or re-entering the labour market are youth and women. Entry-level training is critical for these groups in order to both stabilize their future employment prospects and alleviate particular skill shortages in the economy.

The school system has a large role to play in increasing the preparedness of youth to effectively enter the labour market. There needs to be expanded liaison between the K-12 system and the other stakeholders in the skills development system such as industry, colleges and institutes. School dropouts who have found employment, but have not mastered basic skills, should be given the opportunity for training, either in the workplace, or outside. Cooperative education opportunities must be expanded, and funding responsibility for this alternative sorted out. Concerns that need to be addressed in relation to youth are the high drop-out rate (30%), the extent of illiteracy that exists (17% of the population over 15 are functionally illiterate) and the underrepresentation of young women in mathematics and the natural sciences.

Vocational or "blue-collar" training should not be seen as the second-best choice to academic studies. To some extent, the attitude still exists that the academic route should always be first taken and, if the student is not successful in this avenue, he or she can always fall back on the so-called less attractive option of vocational training. It is important to communicate the fact that success in either of these streams depends upon similar qualities--developed skills in literacy and numeracy, self-discipline and effort. There has been a drop in the rate of youth unemployment in B.C. to an average of 15.5% in 1988, but it is still well above the overall average rate of 10.3%.

Women also have difficulty in re-entering the labour market, or entering it at a level equal to that of their male counterparts. While the female participation rate has significantly risen over the past decade (56.5% of all females over the age of 15 are in the labour force as opposed to 48.7% ten years ago), women still tend to be concentrated in the clerical and service occupations; and their participation rate is well below that of men (75.2%). In 1988, more than 50% of the women in the British Columbia labour force were in clerical or service occupations. They must be encouraged to participate in training programs covering a broad range of occupations. Women earn an average of 66% of men's earnings, and 30% hold part-time jobs compared to less than 10% of employed men.

There is a need to develop basic skills in the trades, particularly for youth and females, beginning at the K-12 system and continuing with the college system. Skills in the trades can be developed through the apprenticeship system in B.C. Apprenticeship combines practical on-the-job training and technical classroom instruction towards a Certificate of Apprenticeship in the trade of one's choice. Apprenticeship opportunities exist in many trades including construction, electrical, electronic, food, welding, motor vehicle, piping and saw. Unfortunately, apprenticeship is often not considered a preferred skills development option. A challenge exists here to market it to youth and other target groups. Some of the reasons that may contribute to the concern regarding this training option include the fact that the training is of fairly long-term duration and, like all employer-based training, is subject to downturns in the economy.

Other target groups must also have improved access to entry level training. These include Native Indians, visible minorities, social assistance recipients and persons with disabilities. Training programs must be developed in such a way as to minimize existing attitudinal and financial barriers to their participation. Much is already happening in this regard, particularly through community colleges, but

other initiatives are needed to increase participation by these groups.

A lack of basic skills often has to be addressed prior to training in entry-level skills. Many of the individuals in the target groups, particularly youth, lack reading, writing, numeracy, analytical and interpersonal skills. We must ensure that these individuals have, at the very least, the ability to read, write and communicate effectively, and have a basic understanding of mathematics.

A major impediment to expanding entry-level training in B.C. is the insufficient capacity in the college and institute training system. An analysis conducted by the Ministry of Advanced Education and Job Training found that colleges and institutes identified the need for over 100 new programs to "address shortfalls in meeting the current and anticipated needs of the workforce."

3. Lifelong Skills Development and Upgrading

As well as providing entry-level training to equip new entrants with skills, our training system must provide opportunities for existing workers to update themselves with new skills. Firms are developing new products and developing new ways to improve productivity so that they can better compete in world markets. These changes require different, and often higher-level, skills of workers--computer skills, advanced technology skills, upmoded trade skills, increasingly sophisticated reading, writing and numeracy skills.

As a result of the rapid diffusion of technology, the Economic Council of Canada (ECC) predicts the use of computers will increase from 21% of the B.C. workforce in 1985 to 55% in 1990. Based on the ECC study, 93% of firms which adopt technology provide retraining. The need for skills upgrading will be particularly high in pulp and paper, electronics equipment, and primary metals manufacturing, as well as in the mining and forestry sectors. Retraining demand is becoming prevalent particularly among technologists/technicians, process operators, production workers, some construction trades and certain service sector jobs (e.g., auto mechanics, clerical and finance occupations).

Skills updating is also needed for women to allow them to compete for positions in more stable, higher-paying, male-dominated occupations; and to allow them to re-enter the labour market. Access to continuous skills development is needed for older workers and tradesmen to allow them to remain in their jobs despite technological advances. In an era of advancing technology, it is important that tradesmen receive the most up-to-date skills so that they are able to

make an effective contribution, and are able to fully take advantage of opportunities for advancement. Skills updating is needed for immigrants, many of whom have high skill levels but need to adapt them to our Canadian workplaces. It is also needed for the underemployed who deserve the opportunity to work at their full potential. Finally, skills updating is needed for instructors and industrial trainers to ensure that the above individuals receive the training that matches the skills required in the current and future labour market.

While the public training system capacity to meet the increasing demand for upgrading and retraining needs in the province must be enhanced, what is even more critical is a flexible policy for funding to meet emerging needs. Training institutions need to be able to respond quickly to new, sometimes unpredictable, skills upgrading needs.

4. Access and Delivery

Skills development must be more accessible. There are people within certain groups that have not had ready access to education and training for various reasons, including institutional, economic, attitudinal and physical barriers. These groups include older workers, women, immigrants, natives, income assistance recipients, youth, and persons with disabilities. It is important that these groups are supported in their efforts to develop their skills and contribute to a healthy economy through work.

Flexibility in time, location and content is essential in delivery models for training. The traditional classroom setting does not work for all sectors of the population. Part-time training must be available and subsidized. Skill training must increase on the actual work site. While most employers recognize the benefits of workplace training, the training tends to be short term, and generally either for new employees (orientation), or to upgrade skills of existing employees. Many firms need assistance in incorporating the role of training into long-term objectives. Small businesses, in particular, are creating many new jobs in this province but have few resources to provide training for workers. These firms can perceive a lack of return on investment for monies spent on training. It must be emphasized that this investment will result in increased productivity, reduced turnover, improved staff morale, and eventual economic growth for the organization.

Individuals who are working in low skill, low paying jobs need release time, and often subsidization, to undertake training (while working) so that they can eventually move into positions offering an income adequate enough to support a comfortable lifestyle.

Training should be offered in locations accessible to persons with disabilities and at times convenient to those with family responsibilities. Support mechanisms must be in place that eliminate barriers to participate in training such as inadequate or financially inaccessible child care and high transportation costs (or inaccessible transportation for the disabled).

Trainers and instructors delivering programs require ongoing professional development. The highly specialized skills that are being taught require updated knowledge on the part of instructors. Entry-level training and skills upgrading and retraining programs often require "upgraded" curriculum development and capital for equipment and facilities. Without resources to update curriculum and equipment, training institutions are constrained in effectively meeting emerging labour market needs.

5. Partnerships

There are no shortage of skills development "players" in B.C. In order to minimize fragmentation, duplication and overlap, and conflicting goals, the skills development stakeholders--employers, workers, educational and training institutions, professional and community groups, and government--must cooperate to meet the demands for skilled workers in the economy.

Existing partnerships must be strengthened--those between education and industry, colleges and professional groups, educational/training institutions and the K-12 system, and employers and labour. Professional associations provide key focal points for training their members; however, stronger exchanges are needed between them, the training system and employers.

Government can play a key role in these partnerships, as a facilitator. It can establish standards, provide financial incentives to students and trainees, and provide resources. Public policies can encourage private sector firms to play a greater role in training; and they can encourage and support educational institutions in their efforts to provide lifelong or recurrent education. Government can fund special pilot projects that develop innovative approaches to skills training, and provide "seed capital" for innovation in training.

6. Communication and Awareness

Both the need for skills development and the availability of skills development opportunities and services must be communicated to the stakeholders involved. Ultimately, willingness to participate in and support skills development comes down to attitude, to values towards training, and to a commitment to investing in human resource development.

Employers must be informed of the need to train employees using a variety of methods, and the importance of human resource planning. The commitment of educators/counsellors must be reinforced and schools should focus on educational preparation for careers. Students must be made aware of what skills are presently needed by the labour market, and the potential of the various careers as far as income levels, job satisfaction and future need are concerned. Workers must be prepared to exert individual responsibility and contribute time and resources for participating in skills development.

Communication materials must encourage women to enter non-traditional work, and young people, especially young women, to continue with math and science studies. A provincial "training culture" and entrepreneurial attitude must be promoted through a targeted communication strategy.

IV. SKILLS DEVELOPMENT STRATEGY

The Minister of Advanced Education and Job Training, the Honourable Stanley B. Hagen, has said that British Columbia requires a training culture - "a long-term vision of training that can be embraced by every British Columbian, regardless of age, region, or experience."

A training culture is an attitude of optimism and flexibility on the part of all stakeholders in the skills development system, and in the ability to both develop and access skills training. It has been defined as a "mindset" where the importance of skills training is understood and acted upon routinely, normally, and as a matter of course. Basically, it is the starting point for positive change in the way we set up programs to develop our workforce to their full potential.

The Skills Development Advisory Committee carefully reviewed the issues to determine the barriers that they presented to equitable and active participation in skills development. They then developed a strategy that would reduce these barriers and enhance the existing skills development system.

This strategy includes the provision by government of information and advice to employers, organizations and institutions to assist them with human resource planning and development; initiatives to enhance the capacity of institutions to respond to existing and future labour market demands; initiatives to increase participation of under-represented groups in training programs; enhancing flexibility in funding and delivery; and a communications plan to increase the awareness of the value of training and the need for effective partnerships to be developed between the stakeholders involved in it.

Cornerstones of the Strategy

Human resource planning (HRP) is critical to a long-term skill development strategy. It involves a proactive perspective to prevent problems from occurring rather than reacting to them after the fact. HRP involves the commitment to, and participation in, the process by all the stakeholders; and it involves a recognition by those doing the planning, and those benefitting through it, of the fact that workers hold the key to competitiveness of organizations and to the future economic growth of this province. Firms must be aware of what their human resource needs are in order to effectively plan. Institutions need to know what skills will be critical in a changing economy so they can plan.

A critical aspect of human resource planning is the ability of the system to have access to labour market information including assessments of anticipated demand for skills and occupations; and information on training activities and practices in existence in other jurisdictions and their effectiveness.

Human resource planning is also a necessity at the macro level. The Labour Market Policy Branch of the Ministry of Advanced Education and Job Training could establish a working group of relevant Branch, College and Institute, employer and regional representatives, to coordinate existing and future labour market/training needs analyses throughout the province. Training and Enterprise Centres could further develop their current plans to be focal points and a clearinghouse for the dissemination of labour market training needs and human resource planning information to employers, workers, students, educators and communities.

The **capacity** of the existing system to meet the needs of the economy must be expanded. As mentioned earlier, the colleges and institutes have recently reported to the Ministry that there are long waitlists in the categories of trades, technology, health and human services and business, tourism and office administration. They have stated that additional funding is required to allow them to respond to these present and anticipated needs in a creative, flexible and cost-effective manner. On the other hand, the institutions also report vacancies in program areas that have excellent job prospects.

Information must be provided to students at the high-school and college level, counsellors and parents which will raise awareness of training opportunities in programs that have a high potential for well-paid employment.

Inadequate skills development capacity in colleges and institutes has become a major barrier to an effective response to new local labour market demands. Waitlists could be reduced where a demand for skills tied to industry was demonstrated. This could be achieved by giving the colleges more flexibility in program development in response to the needs of their areas.

The private sector, particularly the smaller firms, need to be involved in remedial training of their workers, and skills upgrading to meet changing skill requirements. Often, however, they do not have the time or the financial or human resources to meet this need.

Flexibility in funding arrangements can facilitate a quick response by the public institutions and the private sector to ensure that training is relevant to the changing needs of the marketplace.

A system should also be developed whereby apprentices who have had their training interrupted through economically induced disruptions to their employers' situations, could be brought back into the system for completion of their programs, and incentives provided for alternatives to the traditional model of apprenticeship which could conceivably reduce the time for eligibility for journeyman status, and which are not dependent upon the ups and downs of employment demand. Policies can be implemented to facilitate bridging such as skilled tradespersons to engineering technologies and engineering technologists to move into degree programs. Short-term training opportunities should be available to skilled tradesmen to update their skills. These strategies could be implemented through an expanded Provincial Apprenticeship and Training Board role. The composition of representatives could be broadened to cover all types of training.

Training programs must be flexible--in location, method, scheduling and content. Training opportunities must be available so that, to the extent possible, persons are not denied access to training because they live in a remote community. Method of training must take into consideration the needs of the employer as well as the worker, and must be based on the varying educational and cultural backgrounds of the trainees. Scheduling of training also has to be balanced with family responsibilities of workers and production requirements of employers, or human resource realities of institutions. Training content must be relevant to the needs of the employer as well as the present and long-term needs of workers/students.

This required **flexibility in delivery** can become a reality when partnerships are developed between open learning and small business, college and industry, K-12 system and training institutions, business and labour, and federal and provincial governments. All of these partnerships must have the opportunity to consult and act on the needs of the labour market and the barriers that prevent any B.C. citizens, especially youth, women, older workers, visible minorities, Natives and persons with disabilities, from accessing it. Many of these target groups are unaware of the network of skills development opportunities and services available.

A targeted print and media **communications strategy** must be implemented to impart to all of the stakeholders the value of training and upgrading and the need for effective communication linkages between public and private trainers

and businesses. The communications materials must reach individuals to remind them of their responsibility in the process and to provide them with information to make the right career choices. It must reach the small businesses who need to be aware of the value of training and of support programs that may be available through Government. It should educate all employers on the need for enhanced human resource planning which leads to efficiency in management and effectiveness in adjusting to changing conditions. Communication materials should be in a form that persons with sight and hearing disabilities can access.

In short, the commitment of the stakeholders to the enhancement of the existing skills development system, and to the promotion of a training culture, must be communicated to the target groups that stand to benefit from it.

V. RECOMMENDATIONS

Specific recommendations proposed are:

1. **Increase flexibility and expand the capacity of the existing skills development system to meet the needs of the B.C. labour market. (The system includes public and private career, technical and vocational institutions providing entry-level and upgrading opportunities.)** This will require:

   - additional instructional spaces;
   - capital to update facilities and equipment;
   - curriculum development;
   - block funding to colleges/institutes for broad categories of training rather than for specific programs; and
   - development of alternative ways to deliver apprenticeship training.

   Rationale: Public and private training institutions are often prevented from quickly responding to local labour market needs as they arise. Industries are identifying increasing numbers of critical skill shortages to which the system is not totally responding. Colleges and institutes have also documented many local training needs to which they are unable to respond due to a lack of capacity. Skilled tradesmen and technical workers will enhance the province's competitiveness in this era of global change.

2. **Establish an advisory body to develop a framework in which improvements to the system can be implemented, and to develop a planning mechanism to establish annual priorities for skills development.** The advisory body should ensure that:

   - local advisory groups and partnerships among businesses, labour, colleges, schools, private training institutions, and governments are in existence in each region to identify local priorities and needs; and

- planning is complementary to existing or planned initiatives of all members of the system (e.g., CEIC's Labour Force Development Strategy).

Rationale: A strong, consensus-building mechanism is needed amongst stakeholders to enhance skills development and build a training culture. Integration and coordination of activities will be essential to this process.

3. **Enhance quality of the existing system** through initiatives which will:

- increase participation rates and access for under-represented groups (e.g., youth, women, older workers, social assistance recipients, Native Indians, and persons with disabilities);

- improve counselling, preparatory training, access to English language training, etc.; and

- support faculty and trainer opportunities for updating in state-of-the-art technologies and practices through industry internships and institutions, and industry personnel exchanges.

Rationale: The decline in new labour force entrants and the increasing attrition amongst the aging workforce will require greater utilization of the existing workforce, particularly those persons on the margin of the labour market. Some initiatives are already in place to address training needs of under-represented groups such as the Task Force on Native Learners, the Task Force on Literacy, the federal Labour Force Development Strategy, etc. However, certain groups are still seriously under-represented in both training programs and the workplace. Greater utilization of the potential of these groups will contribute to economic growth and reduce dependency on social programs.

4. **Establish a fund to support innovation in training and human resource planning and development.** The quality of this in organizations could be enhanced through:

- assisting private sector firms, particularly small businesses, to articulate their training needs; and

- assisting organizations to develop and adopt open learning strategies for employees and self-employed persons.

Rationale: If private sector firms can be motivated to incorporate the role of training into long term objectives, the province will benefit from increased economic growth.

5. **Develop a communications strategy to increase the awareness throughout the province of the critical importance of human resource planning and skills development, and of the changing nature of the world of work.** The strategy should be targeted to:

- employers, to inform them of the need to training employees using a variety of methods;

- educators/counsellors, to advise them of the need to prepare students for the real world of work;

- students, to inform them of the training options available and the skills presently needed in the labour market; and

- individuals, to remind them of their responsibility to contribute time and resources to skills development.

Rationale: The human resource development necessary for this province to compete successfully in the global marketplace of the 1990s will not happen until we are able to convince and motivate individuals and organizations to take advantage of skills development opportunities.

APPENDIX I

SKILLS DEVELOPMENT ADVISORY COMMITTEE

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APPENDIX II

SUPPORTING GRAPHS/CHARTS

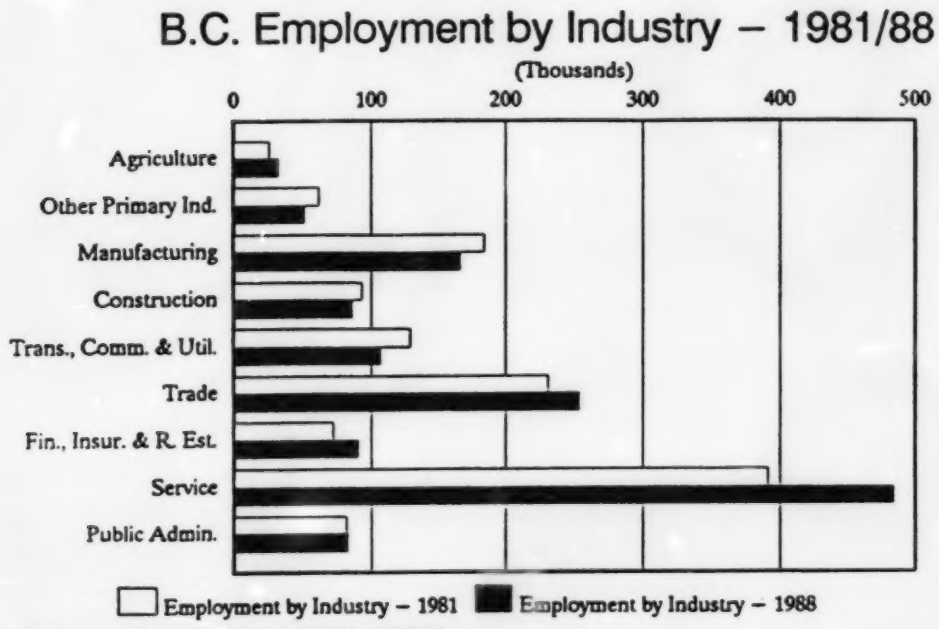
PREPARED BY:

LABOUR MARKET POLICY BRANCH

1. B.C. Employment by Industry
2. B.C. Productivity and Employment
3. Aging of the B.C. Work Force
4. Disabled Persons and Work
5. Participation of Aboriginal Peoples in the Labour Market
6. Unemployment in B.C.
7. Employment Growth by Occupation - 1981/88
8. B.C. Job Growth - 1979/86
9. Employment and Education in B.C.
10. Educational Requirements for New Jobs
11. Skilled Worker Shortages in B.C.
12. Unemployment & Job Vacancies

The Changing Economy

Globalization of markets, increased international competition, and the introduction of new technologies are leading to restructuring and significant changes in the economy of British Columbia.



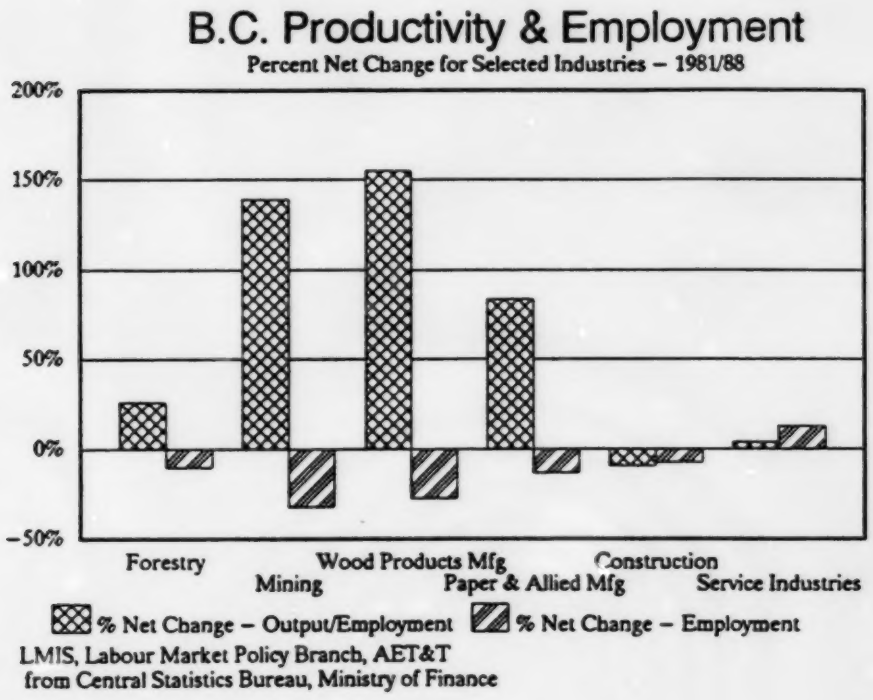
LMIS, Labour Market Policy Branch, AET&T
from LF Annual Averages, Statistics Canada

* In the period from 1981 to 1988 the service - producing industries accounted for all of the net employment growth in B.C. 120,000 new jobs were generated in this sector. Employment in the goods - producing industries actually declined by 8.4%, or 32,000 persons.

* Almost all of the employment growth was recorded in the trade; finance, insurance & real estate; and personal and business service industries. Employment increased in these industries by 20% from 1981 to 1988.

Productivity Increases in the Goods - Producing Sector

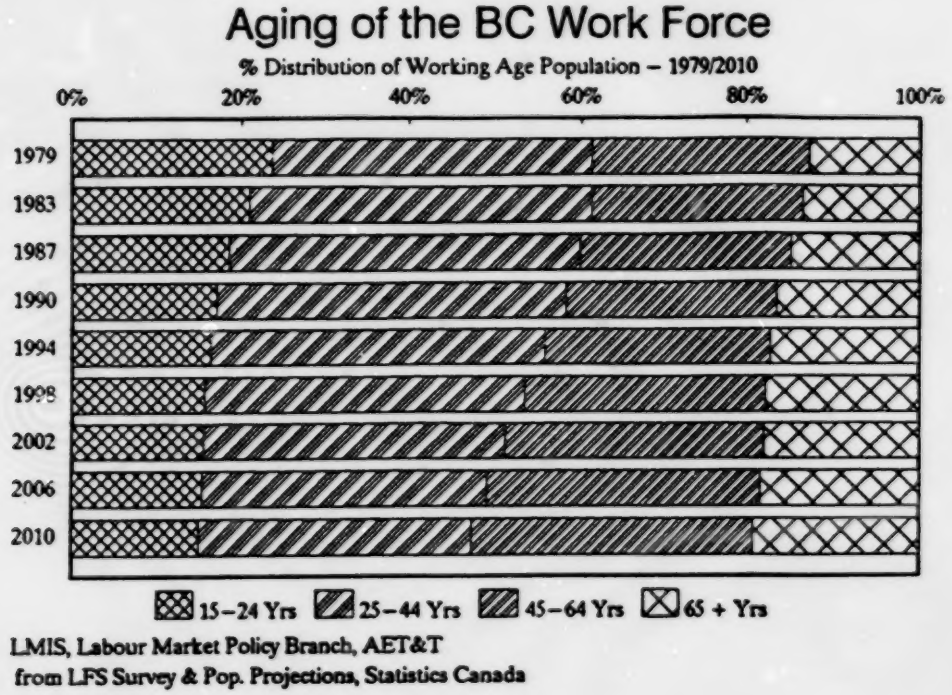
Productivity has increased while employment has declined in the goods - producing industries.



* **While employment has dropped in the goods producing industries, productivity has increased dramatically due to rationalization and the introduction of new technologies. Net productivity growth exceeded 75% in the mining, wood manufacturing, and pulp and paper industries between 1981 and 1988.**

A Changing Labour Force: Patterns of Employment/Unemployment

An aging workforce and fewer young people entering the job market will entail a greater reliance on existing and older (45-64) workers, the need for more retraining, and intensified efforts to increase the participation of traditionally under-represented groups in the work force such as natives, women and the disabled.

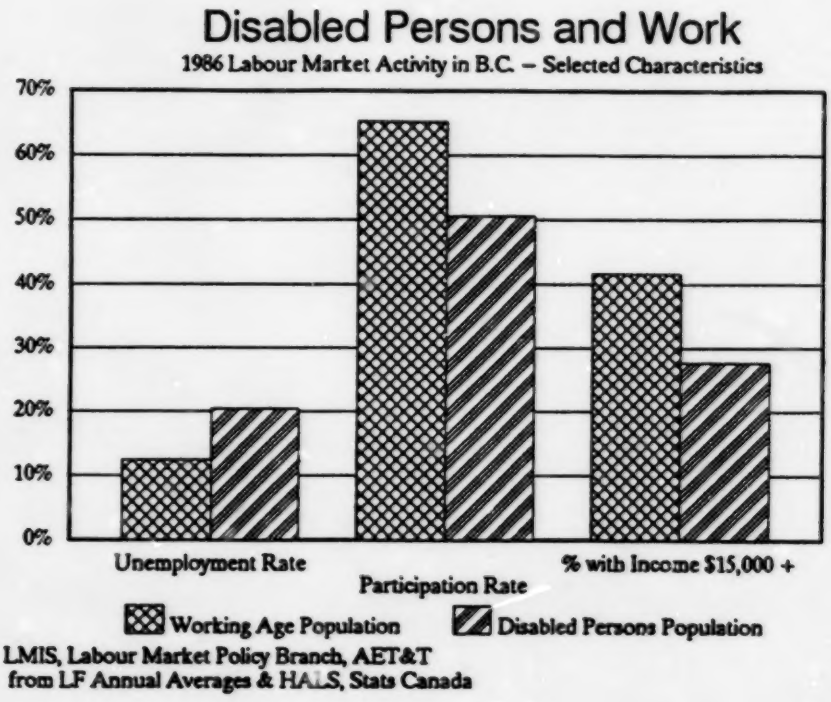


LMIS, Labour Market Policy Branch, AET&T
from LFS Survey & Pop. Projections, Statistics Canada

* Between 1981 and 1988 the working age population aged 15 to 24 dropped from 23% to 18% of the potential workforce. By the year 2010 the working age population aged 15 to 24 will have dropped to 14.9% of the potential workforce. During the same period (1981-2010) the working age population aged 45 to 64 is expected to increase from 25.2% to 33.4% of the potential workforce as the baby boomers approach middle age and near retirement.

Participation of Under-Represented Groups

Under-represented groups are still playing catch-up in terms of labour market activity. The participation rate for women in the labour force has increased from 52.3% to 56.5% between 1981 and 1988. However, it remains significantly below the male participation rate of 75.2% (1988 - Statistics Canada).



* Participation rates among the disabled (at 46.1% in 1986) are significantly below that of the population at large. In 1986 the unemployment rate (26.2%) was running at twice the B.C. average of 13.2%. The percent reporting incomes of $15,000 or more was half of the provincial average. (Health & Activity Limitations Survey, Statistics Canada)

Participation of Aboriginal Peoples in the Labour Market

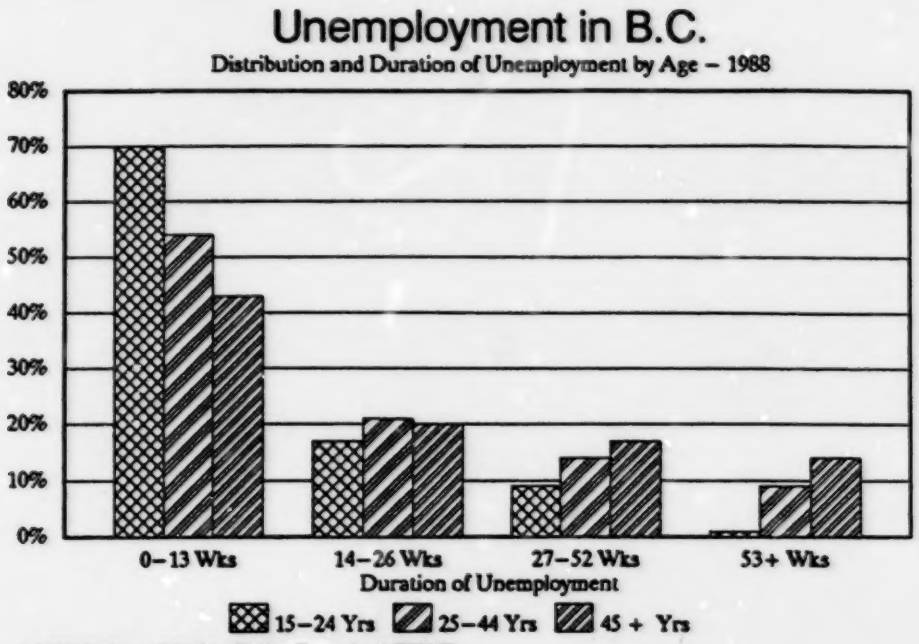
LABOUR FORCE ACTIVITY - WORKING AGE POPULATION, 1986

	Total	Employed	Unemploy	Unem Rte	Part Rte
Canada					
Total Population	19634.1	11702.2	1347.6	10.3%	66.5%
Aboriginal Peoples	451.9	210.6	61.9	22.7%	60.3%
British Columbia					
Total Population	2259.3	1289.4	194.8	13.1%	65.7%
Aboriginal Peoples	82.2	35.6	14.9	29.6%	61.5%
Vancouver					
Total Population	1108.6	670.8	86.7	11.4%	68.3%
Aboriginal Peoples	22.6	11.5	3.4	22.6%	65.8%

LMIS, Labour Market Policy Branch, AET&T
from CEIC and Statistics Canada

* While participation rates for aboriginal peoples are closer to the B.C. averages, unemployment rates in 1986 were close to 30% (22.6% in Vancouver) (86 Census - CEIC and Statistics Canada) and almost three times the provincial average.

Patterns of Structural Unemployment

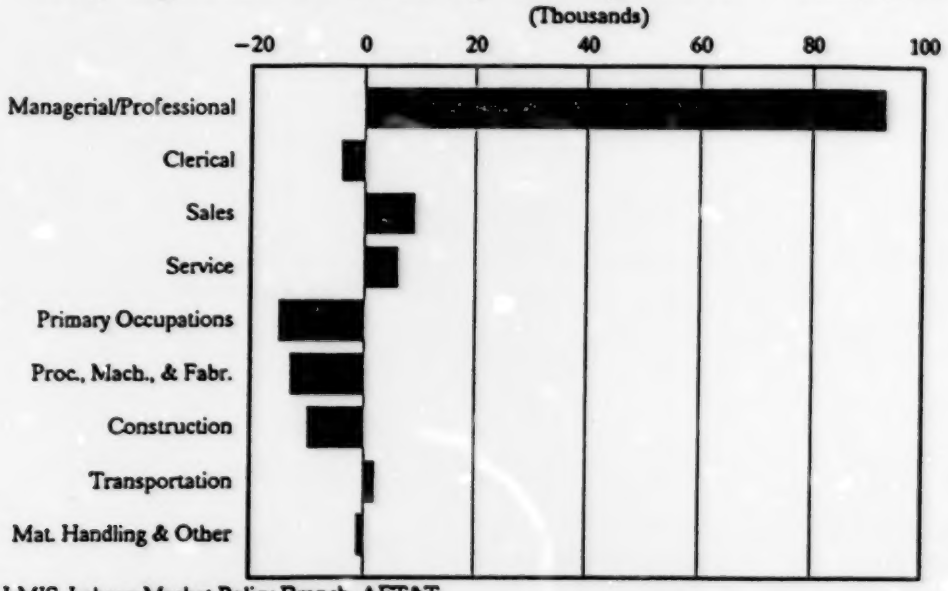


LMIS, Labour Market Policy Branch, AET&T
from LF Annual Averages, Statistics Canada

* Since 1983 employment growth has averaged 2.3% a year in British Columbia, comparing favourably with the national rate of 2.6%. However, a significant number of unemployed workers are remaining out of work for extended periods of time, and length of unemployment increases with age. Average duration of unemployment for older workers aged 45 years and over was over 25 weeks - compared to average duration of unemployment for youth aged 15-24 of 12 weeks

Changing Job Requirements

Employment Growth by Occupation – 1981/88



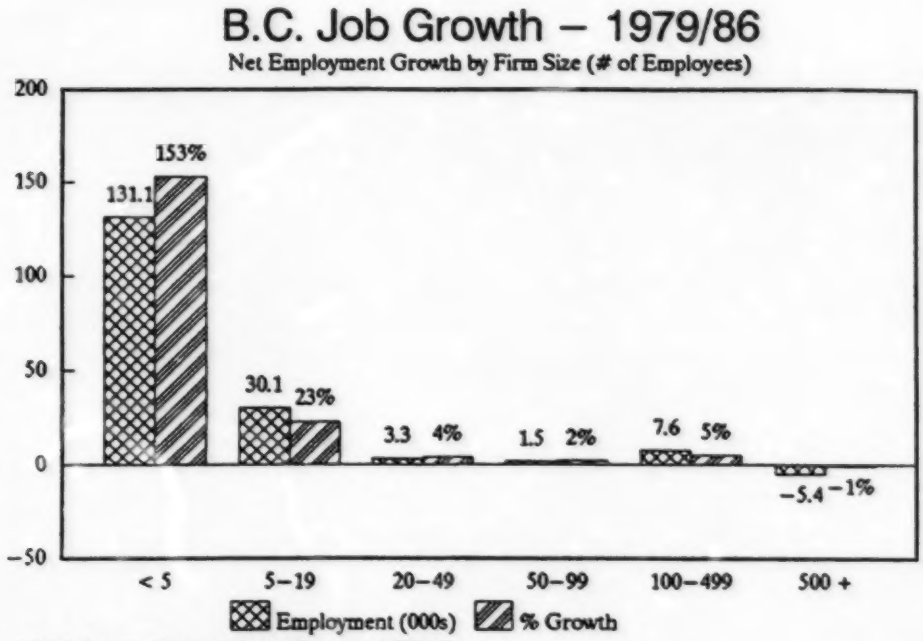
LMIS, Labour Market Policy Branch, AET&T
from LF Annual Averages, Statistics Canada

* Between 1981 and 1988 new jobs in managerial and professional occupations accounted for most of the net employment growth in B.C.

* The service - producing sector is forecasted to generate 74% of new jobs between now and 1993. Of the 138,000 new jobs in service industries, over half will be in the community, business and personal services industries.

* Over one quarter of new jobs to 1993 will be in the managerial and professional occupational categories. Another 42% of new jobs will be in clerical, sales and service occupations.

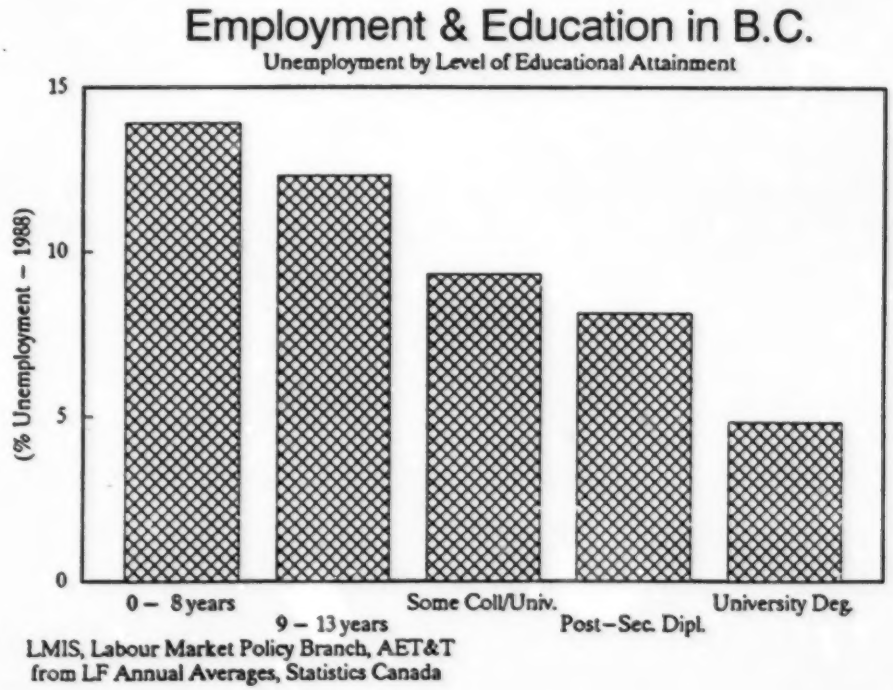
Role of Small Business in Employment Growth



Small business has been a major contributor to employment growth in B.C. In 1986 small businesses employing less than five employees made up 75.8% of all businesses in the province. Between 1979 and 1986 net employment growth among small businesses employing less than five employees totalled 153%. This compares to a 1% decline in net employment among large firms employing 500 or more staff.

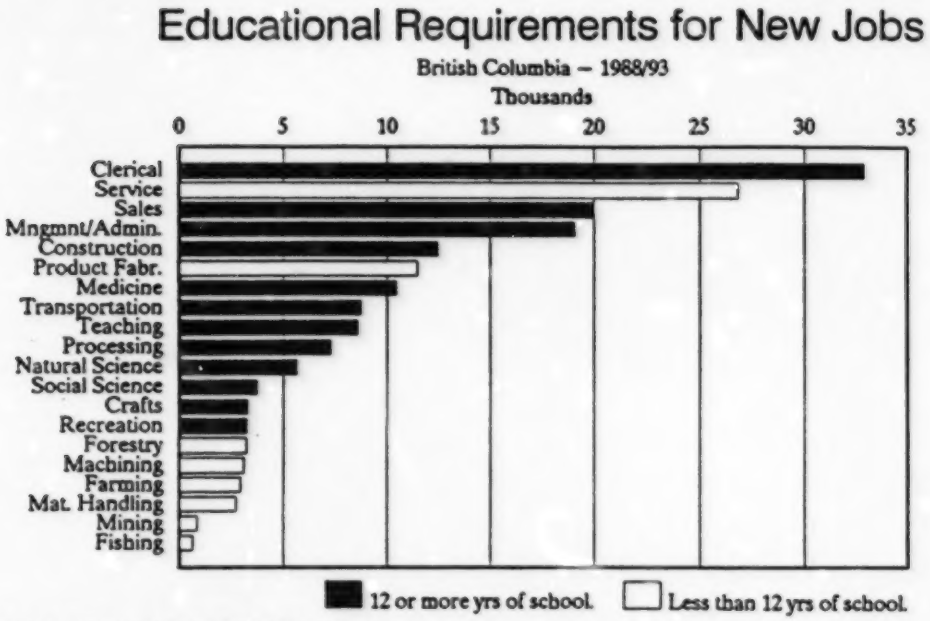
Matching Jobs with Workers

Educational and skill requirements for jobs are changing, and most new jobs will require higher levels of education and more training.



* In 1988 unemployment rates among persons in B.C. with 8 years of schooling or less averaged 13.9%. High school graduates fared little better, with unemployment rates of 12.3%. By contrast persons with a post-secondary certificate or diploma, and university graduates, had significantly lower unemployment rates of 8.1% and 4.8%.

Increasing Skill Requirements for New Jobs



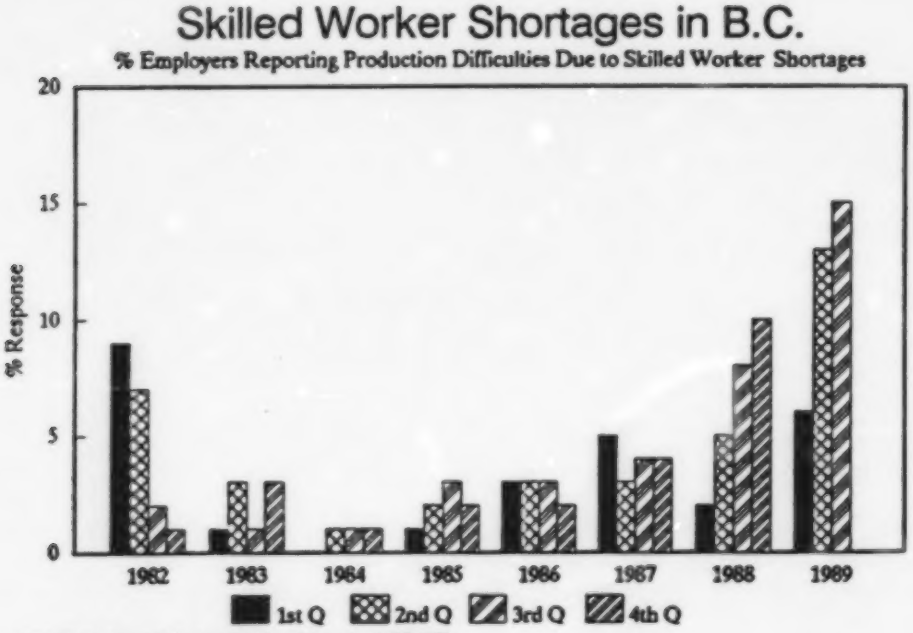
LMIS, Labour Market Policy Branch
Advanced Education, Training & Technology

* **Based on projections of future occupational demands in B.C. through to 1993, it is estimated that 86% of new jobs created will require 12 or more years of education and training.**

Labour Market Mismatches

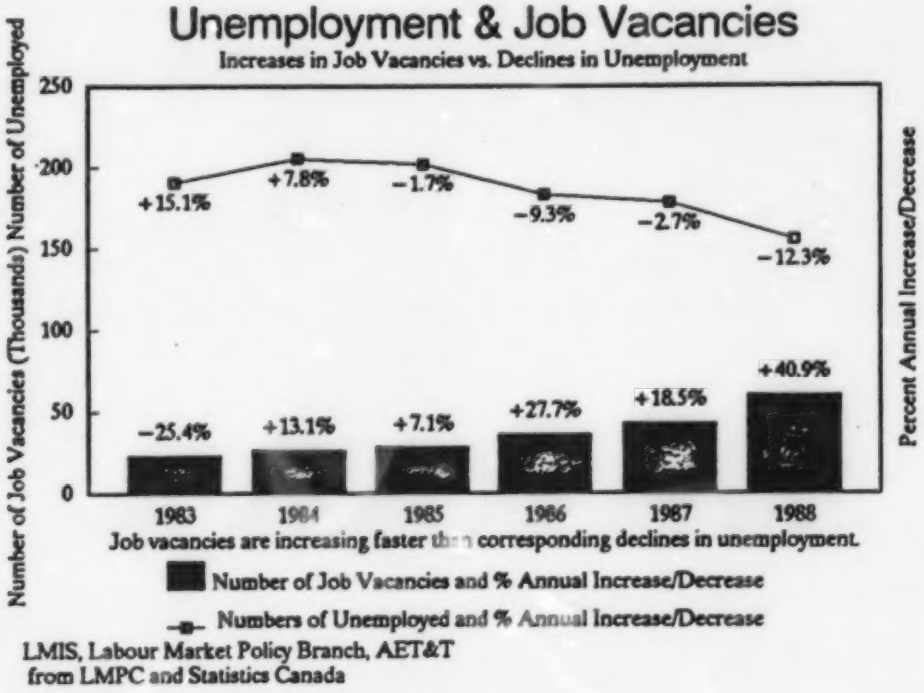
The application of new technology and, in particular, computers is increasing the skill level requirements of many occupations. Basic reading, writing and mathematical - as well as analytical, technical, and communications - skills will be required for many of the new jobs.

Skills shortages have been identified in the high technology occupations and among health care professionals, air traffic controllers, computer specialists, service workers, school teachers, and the highly skilled trades.



* According to Statistics Canada, the number of employers in British Columbia who have identified shortages of skilled labour as a major factor affecting production has climbed from 5% in 1982 to 11% in 1989.

Job Vacancies and Unemployment



LMIS, Labour Market Policy Branch, AET&T
from LMPC and Statistics Canada

The job vacancy rate in British Columbia has been rising faster than the unemployment rate has been coming down, suggesting a growing mismatch between the skills required, and those which are available, in the job market. In 1988 there were as many as 50,000 to 60,000 job vacancies in the B.C. job market, despite an average unemployment rate of 10.3%.

APPENDIX III

WORKING DOCUMENT
PREPARED FOR SKILLS DEVELOPMENT
ADVISORY COMMITTEE

BY:

COLLEGE AND TECHNICAL PROGRAMS BRANCH

Please note: This document does not include apprenticeship numbers. These will be provided at the meeting.

WORKING DOCUMENT

for the
SKILLS DEVELOPMENT ADVISORY COMMITTEE

from
COLLEGES AND TECHNICAL PROGRAMS BRANCH

November 20, 1989

SUMMARY STATEMENT

FTE estimates were made for each of the five and ten year periods requested. The total FTE's projected are as follows:

1989	32,764
1994/95	39,409
2000	45,924

The dollar equivalents based on the average cost per FTE are as follows:

1989	$201,503
1994/95	$242,367
2000	$282,605

The dollar costs of the estimated FTE data does NOT reflect inflation during the projection period.

INTRODUCTION:

The data presented in this report is presented under a series of categories combining associated programs with the program profile. Although these categories have been identified to generalize the data on trends in FTE growth and funding levels, they do not totally conform to the major technology and vocational groupings.

An outline of the program categories used in this analysis is provided below. To indicate the distribution of existing programs, examples of the major programs within each group are also identified.

1. ABE/ESL (ABE, Literacy, ESL)
2. Engineering Tech. (civil structural, mechanical, survey technology, etc.)
3. Computer Tech. (computer systems, programming, technology, etc.)
4. Food Production (agriculture, aquaculture, horticulture, etc.)
5. Resource Management (forestry, wildlife, mining, etc.)
6. Health (nursing, medical technologies, dental, and other health related)
7. Business Administration (accounting, small business management, retail merchandising, recreation management, etc.)
8. Tourism:
   8.1 Management (hotel administration, etc.)
   8.2 Front Line (food services, cooking, etc)
9. Communications/Arts (media, journalism, communications, fine and performing arts, etc.)
10. Construction (carpentry, electrical, welding, etc.)
11. Industrial/Mechanical (millwright, instrumentation, machinist, power engineering, auto mechanic, autobody, heavy duty mechanic, diesel, truck transport, etc.)
12. Service (barbering, hairdressing, janitor, etc.)
13. Office Administration (accounting, word processing, office records management, etc.)
14. Other (criminal justice, library technician, education aides, etc.)

Wherever possible the general trends over the next decade are discussed and a summary table of projected FTE requirements within the program groupings is provided. The FTE estimates are calculated on the basis of projected percentage increases from the existing level of FTE's currently funded within the system province wide. There are significant regional variations in the demand and availability of programs which are not addressed by this data. In addition summary statements regarding the needs for capitalization, curriculum development and professional development within the program areas is briefly discussed.

PROGRAM DISCUSSION:

1. ABE/ESL (ABE, Literacy, ESL)

As the labour force changes and the college system clientele changes to immigrant, the under educated, and the disabled, it will be important to create more integrated programs that combine a skill area with ESL or ABE. Once a student has reached an identified skill level of English or ABE, their program could then include coop education so that the employers could then increase their production.

FTE PROJECTIONS

	89/90	94/95	2000
ABE/ESL			
FTE's	6,570	8,400	9,700
Total Cost ($000)	$40,406	$51,660	$59,655

2. Engineering Tech. (civil structural, mechanical, survey technology, etc.)

Major technological changes in all aspects of society will demand increases in the levels of trained technologists in all the engineering fields. It is expected that the need will continue to outpace the supply, even with major initiatives in the area of retraining. These demands for engineering technology will be applied to all aspects of development but will be particularly important in the areas of energy production, transportation, communication and environmental mitigation.

Of major importance to the economic welfare of the province is the Electronics/CADD/CAM/Robotics/Engineering /Automation group. These fields, driven by electronics and controlled by the computer, are infiltrating all areas of industry from the automobile to the home to industry. The growth rate for this group is 2%/yr but will gradually increase as B.C. retools to secondary industry and takes advantage of its Pacific Rim location.

The college and institute system has the FTE capacity for this group for the next five years but it needs large and consistent infusion of dollars to modernize and keep-up with technology and to provide facilities to accommodate their ever changing requirements. A reorganization and redirection of the existing programs and resources will need to be undertaken before major expansion of the system will be necessary. Thus initial growth in FTE's will not be evident but increasing growth to significant levels could be experienced by the end of the century. As in the case of

virtually all technology areas the capital requirements for program reorganization and keeping pace with technological advancement will be substantial. This requirement has not been addressed in recent years within the system and is one of the contributing factors to the current state of existing programs and their inability to address the industry needs.

FTE PROJECTIONS

	89/90	94/95	2000
Engineering Technology			
FTE's	2,967	3,412	4,005
Total Cost ($000)	$18,247	$20,984	$24,631

3. Computer Tech. (computer systems, programming, technology, etc.)

This is the industry sector that is increasing at the fastest rate at the present time and will continue to be a major growth area over the time frame of these projections. This is especially true for British Columbia (the Lower Mainland and Vancouver Island in particular) as it is seen as a major area of diversification from the present level of dependence on the resource industries by the provincial economy. There would appear to be a much greater potential for expansion of this industry sector in the short term as well as continuing increases in the long term and thus relatively high and sustained growth in the training needs in this area can be expected.

Currently most computer technology programs are highly utilized and could be expanded. High costs in the expansion of computing capacity within the colleges and access to computer equipment by all staff and students significantly hampers program expansion at the present and will be an even more important impediment in the future if insufficient resources are allocated to these programs. Moderate increases in FTE's should be expected in the near future, with even higher increases expected by the turn of the century.

FTE PROJECTIONS

	89/90	94/95	2000
Computer Technology			
FTE's	1,402	1,753	2,103
Total Cost ($000)	$8,622	$10,781	$13,099

4. Food Production (agriculture, aquaculture, horticulture, etc.)

Industry developments in the area of food production are expected to move towards more highly technological processes. More scarce land and sea resources specifically allocated for food production will require more concentrated production utilizing more efficient resource utilization. At the same time an environmental necessity to control negative impacts will require rigorous applications of more sophisticated production techniques to ensure competitive products. This focus on competitive pricing will be reinforced by moves to diminish the artificial control of the market place for many agricultural products. Labour in the field will not necessary increase dramatically restricting the overall growth of jobs in the industry but it is expected that the jobs that will develop will be more demand on technical expertise particular in the areas of research, development and application of new technologies and in managing agribusiness.

As a result of these slow moving trends and the shifts within the focus of the industry presently (ie. from emphasis on agriculture to horticulture), overall growth within the college system of training needs will tend to be relatively low throughout the ten year horizon and will show generally constant growth.

FTE PROJECTIONS

	89/90	94/95	2000
Food Production			
FTE's	443	465	487
Total Cost ($000)	$2,725	$2,860	$2,995

5. Resource Management (forestry, wildlife, mining, etc.)

In the traditional resource management fields demand for training will diminish over the identified time horizon. Labour needs in forestry, mining, petroleum, etc. will continue to show declines to a level of stability probably less than program levels at present. However, new environmental technologies will become increasingly important in this area due to major changes in the requirements for environmental monitoring of industry, the need to mitigate environmental impacts and the need to develop and implement environmentally friendly production processes and practises. Changes in energy sources and the production of fuels for all forms of industrial and consumer use will be a major area indicative of the changes that are on the horizon in this area.

While these changes are receiving much attention at the theoretical level currently their implementation on a large scale will be slow and increases in training demand for people in this sector will be relatively low through the early years of the time horizon and will increase towards the end of the century.

At the same time changes in the nature of these training needs will require significantly higher expenditures of capital and operating costs associated with these programs than presently exists. Even though FTE levels may not be dramatically increased, capital costs of providing appropriate facilities will rise significantly.

FTE PROJECTIONS

Resource Management

	89/90	94/95	2000
FTE's	655	721	786
Total Cost ($000)	$4,028	$4,434	$4,834

6. Health (nursing, medical technologies, dental, and other health related)

There is a clearly established shortage of training spaces in nursing programs. Ministry of Health and Ministry of Advanced Education have collaborated in presenting a submission to Treasury Board to expand programs in this area over the next five years by 300 seats as a result of the political commitment made in response to the recent labour dispute.

Considerable expansion is also projected in the area of paraprofessional programs although work needs to be done to address concerns over job classifications and supervisory relationships.

In the field of medical technologies basic diploma programs will continue to be well attended and additional advanced specialty programs of varying length will be required beyond basic training (ie. Emergency Nursing, Critical Care, Obstetrics, Operating Room Nursing and Pediatrics)

The need for increased skill training in dental auxiliary areas will continue. These positions are both supported and to an extent controlled by the Dental Association of British Columbia. A steady but moderate increase is foreseen.

FTE PROJECTIONS

	89/90	94/95	2000
Health			
FTE's	3,900	4,500	5,000
Total Cost ($000)	$23,985	$27,675	$30,750

7. Business Administration (accounting, small business management, retail merchandising, recreation management, etc.)

There is a strong employment demand in this area of at least 3000 entrants per year. The post-secondary system currently produces about 2000 graduates per year. There is strong student demand, particularly at Camosun, Douglas, Fraser Valley, Kwantlen, Malaspina and VCC.

Programs require a heavy emphasis on computer skills. New programs which encourage bridging from office administration programs, part-time programs and programs which emphasize skills in dealing with Pacific Rim trading partners are needed. Up to 1000 additional FTEs could be allocated to this area over the next five years.

The strongest demand is in areas where facilities are already overcrowded. However, the space required for business programs is mainly regular classrooms which is not expensive. With the increasing demand for computer skills, approximately 100 computers would be required in order to have sufficient access to computer labs.

FTE PROJECTIONS

	89/90	94/95	2000
Business Administration			
FTE's	5,636	6,600	7,600
Total Cost ($000)	$34,665	$40,590	$46,740

8. Tourism:

8.1 Management (hotel administration, etc.)

The tourism industry is now the largest employer in Canada. Although many of the entry level positions are not considered to be highly skilled, the increasing sophistication of the travelling public and the efforts currently underway to develop certification and professional membership models will increase the demand for management training in this area. Projected needs based on Conference Board Growth Scenarios are for 4,300 new entrants to supervisory positions in the accommodation sector alone. This would suggest a total demand in the tourism industry of 17,000 new entrants into supervisory positions over the next five years (the accommodation sector represents about 25% of the supervisory and management personnel in the industry).

The Ministry currently funds approximately 620 FTEs in tourism management programs, producing approximately 340 graduates per year. Most colleges and institutes identified tourism management as a skills development requirement. There is relatively little training in this field available from the private sector.

Given the high employment demand, the efforts toward certification and the interest shown by community colleges, a reasonable increase would be approximately 100 FTEs a year over the next five years, at a cost of approximately $5,850 per FTE. These increases will be spread all over the province and will have relatively modest facility and equipment requirements.

Institutions should be encouraged to develop and implement programs which are accessible to the thousands of people currently working in the industry. These initiatives have been successful in attracting students in several colleges, most notably Cariboo and Camosun. In addition, many secondary schools are introducing career preparation programs related to tourism. Post-secondary institutions will be most successful in delivering programs if these programs are articulated with career preparation programs.

FTE PROJECTIONS

	89/90	94/95	2000
Tourism Management			
FTE's	620	1,120	1,620
Total Cost ($000)	$3,813	$6,888	$9,963

8.2 Front Line (food services, cooking, etc)

Although the employment demand for cooks, chefs and service personnel continues to be high, the student demand for these programs has not kept pace. Low wages and less than ideal working conditions may be partially responsible; the poor public image and lack of prestige attached to these occupations may also be a factor. As a result, the growth of these programs should be limited to areas where there is proven student demand. In addition, some new programs which focus on the tourism sectors where no programs are currently offered, should be funded during the next five years. A realistic level would be approximately 30 to 40 new FTEs a year over the next five years.

FTE PROJECTIONS

	89/90	94/95	2000
Tourism: Front Line			
FTE's	1,110	1,410	1,660
Total Cost ($000)	$6,827	$8,672	$10,209

9. Communications/Arts

Growth in this sector is highly dependent upon general population growth within the province and with the expansion of many key industry sectors such as retailing, the film industry and changes in recreation and leisure trends in society. It is anticipated that on the whole this area will experience a slow but steady growth over the time frame under consideration.

FTE PROJECTIONS

	89/90	94/95	2000
Communications/Arts			
FTE's	2,567	2,834	3,038
Total Cost ($000)	$15,787	$17,429	$18,684

10. Construction (carpentry, electrical, welding, etc.)

The construction trades, carpentry, electrical, building construction and all sub trades, are growing at a rate of 3%/yr. This equates into a requirement for 10-12,000 tradesmen over the next 5 years. The apprenticeship program addresses most of the training needs of these workers.

The province as a whole can accommodate most of this training need but unfortunately the majority of the growth is in the Lower Mainland and Victoria regions. The training facilities in this region are reaching capacity and serious consideration must be given to providing training at adjacent colleges such as Fraser Valley or near by colleges as Cariboo and Okanagan. The apprenticeship and job training branch should be able to provide accurate estimates on the number of spaces required now and over the next 10 years. We must be aware of the cyclical nature of the construction trades and adopt training methods that will reduce the peaks and valleys.

The first growth phase should require relatively few dollars for facilities upgrading and equipment purchases, but the second phase will require a great deal of funds.

An extensive promotional and career counselling program must be developed to encourage students to enter into the technical and trades fields.

FTE PROJECTIONS

	89/90	94/95	2000
Construction			
FTE's	1,103	1,165	1,300
Total Cost ($000)	$6,784	$7,165	$8,000

11. Industrial/Mechanical (millwright, instrumentation, machinist, power engineering, auto mechanic, autobody, heavy duty mechanic, diesel, truck transport, etc.)

Growth in this sector is highly dependent upon general population growth within the province and with the expansion of many key industry sectors such as manufacturing and transportation. It is anticipated that on the whole this area will experience a slow but steady growth over the time frame under consideration. Of particular note is the impact of increases in electronic control systems entering the field which will place high demands on the skill level for entry into these trade areas and the needs for upgrading of the existing workforce. As a result of these changes, significant resources will also be required to address high equipment costs and the needs for professional development for instructional staff.

FTE PROJECTIONS

	89/90	94/95	2000
Industrial/Mechanical			
FTE's	2,235	2,468	2,725
Total Cost ($000)	$13,745	$15,178	$16,759

12. Service (barbering, hairdressing, janitor, etc.)

Growth in this sector is highly dependent upon general population growth within the province and within the tourism sector. Slow and steady growth as the population base increases is projected for these programs.

FTE PROJECTIONS

	89/90	94/95	2000
Service			
FTE's	282	311	350
Total Cost ($000)	$1,734	$1,913	$2,153

13. Office Administration (accounting, word processing, office records management, etc.)

Bookkeepers, secretaries, general office clerks, and receptionists are included in the list of the 25 highest demand occupations in B.C. Close to 35,000 entrants into these fields are required over the next five years. In addition, close to 9,000 cashiers and tellers, some of whom will require office skills, will be needed in the same period. Specialized occupations like legal secretary and

medical office assistant are not reflected in these categories.

Four institutions, Capilano, Fraser Valley, Kwantlen, and Malaspina report waitlists of one to three years for office administration programs. Close to 2,400 students per year are enrolled in office administration programs currently. These graduates would not come close to meeting the demand for such training were it not for the extensive capacity available in private training institutions and the career preparation programs at high schools. Given the excellent placement rates for program graduates, student demand should be met in the system. This would require close to 800-900 FTEs at a cost of approximately $5,600 per FTE. In addition to the four institutions noted above, North Island and Northwest colleges have consistently over-produced in this program area and should be funded for an additional 30-40 FTEs each.

Institutions should be encouraged to place a heavy emphasis on computer skills as well as communication and interpersonal skills. As a result, these programs would require infusions of equipment dollars. Close to 200 computers would be required in addition to those already owned by colleges.

The extensive training capacity of private training institutions and secondary schools would suggest that colleges place their emphasis on advanced skills and programs as well as on upgrading courses required due to the constant changes in technology. Colleges should have a great deal of flexibility to shift program emphasis to meet local demand. In addition, they should be encouraged to construct their programs in a such a way that transferability to management programs is facilitated. This is required because the old divisions between clerical and management positions are slowly disappearing and there are many more overlaps in skills and functions than before.

FTE PROJECTIONS

	89/90	94/95	2000
Office Administration			
FTE's	2,400	3,300	4,500
Total Cost ($000)	$14,760	$20,295	$27,675

14. Other (criminal justice, library technician, education aides etc.)

FTE PROJECTIONS

	89/90	94/95	2000
Other			
FTE's	874	950	1,050
Total Cost ($000)	$5,375	$5,843	$6,458

FURTHER SYSTEM CONSIDERATIONS:

A number of issues are not specific to the program groups but must be viewed for the system as a whole. Capital equipment and facilities, curriculum development and professional development are the most important of these.

There are many reports indicating the existing and especially the future difficulties that the province will have providing trained people for industry, but there doesn't appear to be an itemized and costed one.

As a result, it is recommended that a thorough study be made of the requirements for capital equipment and facilities for the next 10 years. The report would allow the Ministry to plan for the financial needs of the system. It is generally accepted that major infusion of capital equipment is desperately needed due to three key factors: the 20-year age of the system, resulting in the need for original equipment replacement; the introduction of new technology; and the impact of the restraint years of the early 1980's when equipment needs were neglected. A comprehensive study, however, would be able to document needs and assess priorities in a coordinated fashion.

Curriculum development is a critical area that has typically been underfunded. Major changes are evident on the horizon for many technological programs and major initiatives in curriculum revision and the development of new program curricula will be essential in the near future if the system is to maintain a currency for British Columbia's industrial society.

Also additional capacity will have to be created for instructor training and upgrading. The present ID program may be forced to accept only those who are teaching or have been hired to teach rather than the present model where anyone can take the program. We need a status and projection report from the ID program.

The following data is a general reflection of the priority of needs in these areas for the system as a whole.

ADDITIONAL SYSTEM REQUIREMENTS

	FACILITIES	EQUIPMENT	CURRICULUM	PROFESSIONAL DEVELOPMENT
Construction	L	L	M	M
Business Admin.	L	M	M	M
Engineer. Tech.	L	H	H	H
Tourism	L	L	L	L
Service	L	L	L	L
Industrial/Mech.	M	H	M	M
ABE/ESL	M	M	M	M
Office Admin.	M	M	M	M
Health	M	H	H	H
Fine Arts/Comm.	L	L	L	L
Computer Tech.	M	H	M	H
Resources Mgmt.	M	H	H	H
Food	M	M	M	M
Other	L	L	L	L

L - Low M - Medium H - High

The above chart is a generalization and does not reflect regional requirements, increases or decreases of demands within program groups, or changes due to cyclical demands or emergent needs.

To meet the needs of capital equipment requirements $10-15M per year are required.

FTE PROJECTIONS

	89/90		94/95		2000	
ABE/ESL						
FTE's	6,570		8,400		9,700	
Total Cost ($000)		$40,406		$51,660		$59,655
Engineering Technology						
FTE's	2,967		3,412		4,005	
Total Cost ($000)		$18,247		$20,984		$24,631
Computer Technology						
FTE's	1,402		1,753		2,103	
Total Cost ($000)		$8,622		$10,781		$13,099
Food Production						
FTE's	443		465		487	
Total Cost ($000)		$2,725		$2,860		$2,995
Resource Management						
FTE's	655		721		786	
Total Cost ($000)		$4,028		$4,434		$4,834
Health						
FTE's	3,900		4,500		5,000	
Total Cost ($000)		$23,985		$27,675		$30,750
Business Administration						
FTE's	5,636		6,600		7,600	
Total Cost ($000)		$34,665		$40,590		$46,740
Tourism Management						
FTE's	620		1,120		1,620	
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FTE's	282		311		350	
Total Cost ($000)		$1,734		$1,913		$2,153
Office Administration						
FTE's	2,400		3,300		4,500	
Total Cost ($000)		$14,760		$20,295		$27,675
Other						
FTE's	874		950		1,050	
Total Cost ($000)		$5,375		$5,843		$6,458
TOTAL FTE'S	32,764		39,409		45,924	
TOTAL $000'S		$201,503		$242,367		$282,605